BRA 003

第二級総合無線通信士「英語」試験問題

5問　1時間30分

1. 次の英文を読み、それに続く設問**A−1**から**A−5**までに答えなさい。解答は、それぞれの設問に続く選択肢1.から3.までの中から答えとして最も適切なものを一つずつ選び、その番号のマーク欄を黒く塗りつぶしなさい。

Scientists think they have answered the mystery of how whales got so huge so quickly.

A few million years ago, the largest whales averaged maybe 15 feet (4.5 meters) long. That is big, but you could still hold a fossil skull in two hands. Then, seemingly overnight, one type of whale — the toothless baleens — became huge. Modern blue whales get as big as 100 feet (30 meters), the largest creatures ever on Earth. A blue whale's skull is bigger than a minivan and could probably fit more than five people inside.

The change happened "in the blink of an evolutionary eye," which makes it harder to figure out, said Graham Slater at the University of Chicago, lead author of the study. Their study has proposed an answer. Ice ages in the last 3 million to 5 million years started it, changing the oceans and food supply for whales.

The researchers used fossil records of the smaller whales to create a family tree for baleen whales. Using computer simulations, they started filling in the gaps between the small whales and the modern giants. They concentrated on a time period when the whales got huge and smaller whale species went extinct, somewhere between a few hundred thousand years ago and 4.5 million years ago.

They concluded that when the size changes were starting, the poles were getting colder, ice cover was expanding, the water circulation in the oceans was changing and the winds were shifting. Cold water went deep and moved closer to the equator and then eventually bubbled back up in patches rich with the small fish and other creatures that whales eat. The whales grew bigger because they needed to swim longer distances in search of the places where the cold water bubbled up again.

＜注＞ baleen whale ヒゲクジラ　bubble 湧き上がる　in patches ところどころで

（設問）

A−1 How does the article describe the size of modern blue whales?

1. They are as big as 15 feet.
2. They are the biggest animals ever on Earth.
3. A modern blue whale is smaller than a minivan.

A−2 What was Graham Slater's opinion regarding the whales' evolutionary size change from smaller to larger?

1. His research failed to find out when it happened.
2. He said the change seemed to happen all of a sudden.
3. He concluded the change occurred before the ice ages.

A−3 What did researchers use to create a family tree for baleen whales?

1. They used a baleen whale's skull.
2. They did everything by computer simulation.
3. They first examined the whale fossil data and then used computer simulations.

A−4 Which of the following did NOT affect the enlargement of the whales during the ice ages?

1. Global warming
2. Ice cover expansion
3. Water circulation in the oceans

A−5 Which of the following statements is true according to the article?

1. Ice ages in the last 3 million to 5 million years completed the whales' size changes.
2. Over 4.5 million years ago, the largest whales averaged 100 feet (30 meters) long.
3. The researchers focused on a period when the whales became gigantic and smaller whales died out.

2. 次の英文**A-6**から**A-9**までは、無線通信業務に関する国際文書の規定文の趣旨に沿って述べたものである。この英文を読み、それに続く設問に答えなさい。解答は、それぞれの設問に続く選択肢1.から3.までの中から、答えとして最も適切なものを一つずつ選び、その番号のマーク欄を黒く塗りつぶしなさい。

A-6 When the license cannot be produced or when obvious irregularities are observed, governments or administrations may inspect the radio installations in order to satisfy themselves that these conform to the conditions imposed by the relevant Radio Regulations.

（設問）Under what circumstances may governments or administrations inspect the radio installations?

1. When the license is issued by an appropriate administration
2. When the license is not shown or irregularities are clearly detected
3. When no regular observers are assigned for the inspection of radio installations

A-7 In the maritime mobile-satellite service, a separate safety announcement or call does not need to be made before sending the safety message. However, if available, the appropriate network priority access settings should be used for sending the message.

（設問）How does the above regulation prescribe the way to send safety messages using the maritime mobile-satellite service?

1. The appropriate network priority for the safety message should be used whenever available.
2. Prior to sending a safety message, a separate safety call should be made using the appropriate network priority.
3. It is generally allowed to send a safety message with no network priority even if the priority setting is available.

A-8 Stations in the radiolocation service shall not cause harmful interference to, or claim protection from, stations operating in the fixed or mobile services. Applications of the radiolocation service are limited to oceanographic radars operating in accordance with the relevant ITU Resolution.

（設問）Which of the following is correct with reference to the above regulation?

1. An appropriately operated oceanographic radar is the only accepted radiolocation service application.
2. Only oceanographic radars are allowed to claim protection from stations operating in the fixed or mobile services.
3. Radiolocation service stations shall not cause harmful interference to operating mobile or fixed radio stations but can claim protection from them.

A-9 Communications shall be concise and unambiguous, using standard phraseology whenever available. Abbreviated procedures should only be used after initial contact has been established and where no confusion is likely to arise.

（設問）Which of the following is in line with the above description?

1. Abbreviated procedures should be used whenever confusion may arise.
2. Standard phraseology should be avoided in cases where confusion is possible.
3. Communications shall be straightforward without any likelihood of misinterpretation.

3. 次の設問**B-1**の日本文に対応する英訳文の空欄（ア）から（オ）までに入る最も適切な語句を、その設問に続く選択肢1.から9.までの中からそれぞれ一つずつ選びなさい。解答は、選んだ選択肢の番号のマーク欄を黒く塗りつぶしなさい。

（設問）

B-1 川に捨てられたプラスチックは海に流れ込み、時間とともに劣化して微粒子となり、その微粒子が海洋生物に摂取されることもあり、食物連鎖や環境に害を及ぼしている。海洋専門家は2050年までに、重さでは海洋中の魚よりプラスチックの方が上回るのではないかと懸念している。

Plastic dumped in rivers flows into the sea and degrades (　ア　) time into tiny particles, which can be ingested by marine (　イ　), (　ウ　) the food (　エ　) and environment. Marine experts fear there could be more plastic than fish in the ocean by 2050, measured by (　オ　).

1. chain	2. dimension	3. enhancing
4. harming	5. life	6. on
7. over	8. string	9. weight

4. 次の設問**B-2**の日本文に対応する英訳文の空欄（ア）から（オ）までに入る最も適切な語句を、その設問に続く選択肢1.から9.までの中からそれぞれ一つずつ選びなさい。解答は、選んだ選択肢の番号のマーク欄を黒く塗りつぶしなさい。

（設問）

B-2 日本でオゴノリとして知られる海藻について10ヶ月にわたる研究を行ったノースカロライナの科学者たちは、その海藻が浸食の制御、洪水に対する防御、食物生産の増強及びエビ、カニや魚の隠れ家を提供するのに役立っていることを発見した。その海藻は、あるカキ類の輸入とともに日本からノースカロライナに来たと信じられている。

Scientists in North Carolina who performed a ten-month (　ア　) study of the seaweed (　イ　) as 'Ogonori' in Japan have found that it helps control erosion, protect against flooding, (　ウ　) food production and provide shelter for shrimps, crabs and fish. The seaweed is believed to (　エ　) come to North Carolina with the import of an oyster (　オ　) from Japan.

1. boom	2. boost	3. have
4. known	5. length	6. long
7. popular	8. seed	9. species

5. 次の設問**B-3**の日本文に対応する英訳文の空欄（ア）から（オ）までに入る最も適切な語句を、その設問に続く選択肢1.から9.までの中からそれぞれ一つずつ選びなさい。解答は、選んだ選択肢の番号のマーク欄を黒く塗りつぶしなさい。

（設問）

B-3 船舶交通業務(VTS)は、海上における人命の安全、航行の安全及び効率、並びに海上交通により起こり得る各種の障害要因から、海洋環境、隣接する海岸地域、作業地域及び沖合施設を保護することに寄与する。

Vessel traffic services (VTS) contribute (　ア　) safety of life at sea, safety and (　イ　) of navigation and protection of the marine environment, (　ウ　) shore areas, work sites and offshore (　エ　) from possible (　オ　) effects of maritime traffic.

1. about	2. adjacent	3. adverse
4. economy	5. efficiency	6. favorable
7. houses	8. installations	9. to